

PROGRESS OF MEDICAL SCIENCE

THERAPEUTICS

UNDER THE CHARGE OF

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Renal Function as Measured by the Elimination of Fluid, Salt and Nitrogen and the Specific Gravity of the Urine.—II. *The Effect of High, Low and Normal Diets.*—MOSENTHAL (*Arch. Int. Med.*, December, 1918, No. 6, xxii).—In this paper (2) the author has reinvestigated the subject, using three diets (high protein, low protein and normal) on two series of individuals; the first series on normals, students and members of the teaching staff, and the second series on persons suffering from diseases causing impairment of renal function. Specimens of urine were collected at two-hourly intervals during the day and for a twelve-hour period at night. The modified standards now adopted for normals fix (1) the maximal specific gravity at 1.018 or higher for high diets and 1.002 or higher for low or normal diets. Evidently this is one of the most constant features to be relied on in estimating normal renal function by the test-meal; (2) the variation in specific gravity at 9 degrees or more, though a smaller variation does not necessarily indicate that the kidney is abnormal, provided the specific gravity is 1.002 or over, but may point to a deficient available supply of water from which to form urine; (3) in judging the night specimen only urines exceeding 750 c.c. may be looked on as exhibiting nocturnal polyuria; the concentration of nitrogen may be interpreted as normal if it is over 1 per cent., but not necessarily as an indication of diminished renal function, if it is lower. In summary, the height of the maximum specific gravity and the volume of the night urine are the most constant features of the normal test, regardless of the diet. In abnormal individuals, the comparative value of test meals for renal function on high and low diets was observed in 114 patients. Only the high and low diets were employed. It is very significant that the increase of night urine occurred almost exclusively on the high diet. In the first place, it may be concluded that nocturnal polyuria is a compensatory phenomenon to bring about the elimination of solids which a defective kidney cannot excrete except at lower concentrations than normal;

in the second place, it appears that nocturnal polyuria is a signal that the kidney function is being overtaxed and that, in some instances at least, a suitable diet may do away with this unnecessary strain. Nocturnal polyuria may be absent even when there is a marked renal insufficiency, but when present it indicates an impairment of function, especially if the night urine is increased while the patient is on a low diet. *The Maximal Specific Gravity:* This is probably one of the most important features in measuring renal function by the method under consideration. It has been previously noted how, as the activity of the kidney becomes impaired, there is a tendency for the specific gravity of the urine to assume a lower level until in the final stages it usually cannot be raised above 1.001. In comparing the results of the high and low diet, so far as the maximal specific gravities are concerned, in normal individuals, there is a fairly close agreement. Variations may occur but these are generally caused by the alternate retention or elimination of edematous fluid, and are apparently not influenced by the character of the test diet. The subject whose renal function is not impaired usually shows a fixation of specific gravity at a high level, while with an impairment of renal function this manifests itself at a much lower point. It may be concluded, therefore, that the degree of variation of specific gravity in test-meals for renal function is not very different, whether high or low diets be employed.

Pituitary Headaches and Their Cure.—PARDEE (*Arch. Int. Med.*, 1919, xxiii, 174-184) reviews the various types of headaches and gives the etiology, pathology, symptoms and treatment of pituitary headache, with a report of seven cases. He concludes that (1) pituitary disturbances constitute a fairly common cause of headache; (2) pituitary headache is located between the temples, deep in behind the eyes and is accompanied by dyspituitary signs; (3) abnormality of the sella turcica is demonstrable in almost every case of pituitary disease; (4) administration of the whole gland cures these headaches and the accompanying symptoms in a large percentage of cases, provided there is not a progressive neoplastic growth.

Trinitrotoluene Poisoning, with Records of Five Cases.—GREGORSON and TAYLOR (*Glasgow Med. Jour.*, August, 1918, No. 11). The author cites the clinical records of five cases coming under his observation, two of which died and were autopsied. The clinical picture is that of an acute toxic jaundice resembling the picture of acute yellow atrophy of the liver. The condition shows that there is an undoubted disturbance of the circulation of the bile ending in an accumulation and absorption of bile constituents in the blood, which leads to a severe anemia with pronounced fall in the percentage of hemoglobin, and extreme polymorphonuclear leukopenia. This new type of jaundice, as subsequent events showed, was hepatogenous in its production. A slow pulse and a tendency to mental depression, and to oozing from any wounded surface, are usually associated with the severer types of jaundice. The pulse in Case I was never under 80, was frequently 110, and, in the terminal stages, 160. Itching of the skin, which usually accompanies jaundice, was entirely absent, and oozing from the unwounded mucous membrane was a prominent feature. In Cases II and III there